AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended): A process for generating mammalian cells producing pancreatic hormone, comprising:

obtaining mammalian pluripotent stem cells from differentiated exocrine glandular tissue of an organism, wherein the mammalian pluripotent stem cells ~~have a capacity to~~ form organoid bodies;

cultivating and differentiating the mammalian pluripotent stem cells to generate the mammalian cells producing pancreatic hormone.

2. (Currently Amended): The process according to Claim 1, wherein the mammalian stem cells isolated ~~primarily~~ from the organism are cultivated and differentiated.

3. (Currently Amended): The process according to Claim 1, wherein the mammalian stem cells are provided as an aggregation in a form of organoid bodies.

4. (Currently Amended): The process according to Claim 3, wherein the differentiating of the mammalian stem cells is carried out in the organoid bodies.

5. (Currently Amended): The process according to Claim 3, wherein mammalian stem cells isolated ~~secondarily~~ from the organoid bodies are cultivated and differentiated.

6. (Currently Amended): The process according to Claim 1, further comprising a step of stimulating the ~~generating of~~ mammalian cells producing pancreatic hormone, said stimulating ~~comprising~~ selected from the group consisting of:

providing supernatants of a primary culture of the endocrinal pancreas;

co-cultivation with cell lines of the endocrinal pancreas; and

treatment with immobilized or dissolved molecular differentiation factors provided in the liquid phase,

~~a stimulated propagation of~~

wherein the mammalian cells producing pancreatic hormone ~~and/or a stimulated differentiation of the stem cells~~ are stimulated.

7. (Previously Presented): The process according to Claim 6, wherein the stimulating step comprises:

(a) at least one stimulation treatment selected from the group consisting of:

treatment with supernatants of a primary culture of endocrine pancreas,

treatment with supernatants of cell lines of endocrine pancreas,

co-culture with differentiated cells of endocrine pancreas,

co-culture with cell lines of endocrine pancreas, and

treatment with immobilized molecular growth factors,

(b) activation of at least one gene involved in the differentiation of stem cells into the cells producing pancreatic hormone, and

(c) treatment with molecular growth factors dissolved in a liquid.

8. (Previously Presented): The process according to Claim 7, wherein the treatment with immobilized molecular growth factors comprises a cellular imprinting with molecular differentiation factors immobilized on a carrier.

9. (Previously Presented): The process according to Claim 8, wherein the carrier is a synthetic substrate, a cell membrane or a three-dimensional matrix substrate.

10. (Currently Amended): The process according to Claim 1, further comprising identifying and selecting the mammalian cells producing pancreatic hormone.

11. (Currently Amended): The process according to Claim 10, wherein the selecting of the mammalian cells producing pancreatic hormone comprises a cell sorting process.

12. (Previously Presented) The process according to Claim 10, wherein non-identified and selected cells are subjected to a further cultivation and differentiation.

13. (Currently Amended): The process according to Claim 1, wherein the mammalian stem cells are obtained from secretory glands or glands of a gastrointestinal tract of the organism.

14. (Currently Amended): The process according to Claim 13, wherein the mammalian stem cells are obtained from a pancreas or a salivary gland of the organism.

15. (Currently Amended): The process according to Claim 1, wherein the mammalian stem cells are from glandular tissue that is acinar tissue.

16. (Currently Amended): The process according to Claim 1, wherein the mammalian stem cells are from a vertebrate.

17. (Currently Amended): The process according to Claim 16, wherein the mammalian stem cells are from a primate.

18. (Withdrawn): The process according to Claim 1, wherein the cells producing pancreatic hormone are used for pharmaceutical applications.

19. (Withdrawn): The process according to Claim 18, wherein the cells producing pancreatic hormone are used for treating pancreatic diseases, a metabolic syndrome or metabolic diseases.

20. (Withdrawn): The process according to Claim 19, wherein the cells producing pancreatic hormone are used for treating diabetes, hyperglycemia or impaired glucose tolerance.

21. (Withdrawn): The process according to Claim 1, wherein the cells producing pancreatic hormone produce insulin.

22. (Withdrawn): An isolated cell producing pancreatic hormone, the cell having been generated from a pluripotent stem cell isolated from differentiated exocrine glandular tissue of an organism, and having a capacity to form organoid bodies.

23. (Withdrawn): The isolated cell producing pancreatic hormone according to Claim 22, which is a human cell.

24. (Withdrawn): A cellular composition containing a plurality of cells producing pancreatic hormone according to Claim 22.

25. (Withdrawn): The cellular composition according to Claim 24, wherein the cells producing pancreatic hormone are generated by a process comprising cultivation and differentiation of pluripotent stem cells obtained from differentiated exocrine glandular tissue of an organism, and having a capacity to form organoid bodies.

26. (Withdrawn): The cellular composition according to Claim 24, which additionally contains other cell types.

27. (Withdrawn): The cellular composition according to Claim 26, wherein the other cell types comprise stem cells and/or neighboring cells of islets of Langerhans in pancreatic tissue.

28. (Withdrawn): The cellular composition according to one of Claim 24, which contains a casing or matrix material.

Claim 29-31. (Canceled).

32. (Withdrawn): Artificial islets of Langerhans containing a cell according to Claim 22.